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ABSTRACT

Focusing on theories and practices related to outcomes-based learning (OBL), this paper presents arguments for adopting an OBL approach in Canada's community colleges. Introductory sections review internal and external reasons for making changes to the teaching and learning paradigm, such as new demands for training and reduced funding. Part I then reviews the values related to learning, learners, and the role of the educational institution stemming from traditional and OBL approaches, indicating that the traditional educational values view human beings from a rational/behavioral paradigm, while OBL views them from a phenomenological/development point of view. Part II provides reasons for shifting to an OBL approach related to accountability, effectiveness, efficiency, flexibility, equity, access, and quality and describes differences between traditional education and OBL in terms of program design, teaching roles, and program organization. This section also defines learning outcomes as the significant, essential, transferable, and verifiable learning that must be demonstrated to receive credit for a course or unit; describes differences between learning outcomes and behavioral competencies; and provides a learning outcomes checklist. Part II also details how to write learning outcomes for college programs, highlighting common pitfalls. Finally, part III provides a guide to planning for learning in courses, including planning learning activities, creating a practice and assessment plan and key differences in assessment and evaluation practices between traditional and OBL approaches. (KP)

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A Workshop sponsored jointly by

The Advanced Education Council of British Columbia

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entitled

TRANSFORMING COMMUNITY COLLEGES USING A LEARNING OUTCOMES APPROACH

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INTRODUCTION

This past June at the ACCC Conference in Victoria, keynote speaker Tony Manera quoted Sir Bertrand Russell's **Unpopular Essays**: "Change is one thing, progress is another. Change is scientific, progress is ethical; change is indisputable, whereas progress is a matter of controversy". We were reminded that "as educators, (we) are in a unique position to influence change in a way that will contribute to improvement in the human condition".

This presentation is about change that is fundamental to the influence that community colleges will continue to have on the development of human potential and the economic development of our society. Colleges are well positioned to respond to new demands for career and job training if we see our mandate as one of enabling and equipping individuals to find and maintain a role in a changing workplace.

College education has to be done differently in order to meet new challenges. In Ontario, we find that there are four main requirements for change:

- reducing costs not associated with teaching and learning
- rationalizing programs and services
- increasing productivity within the current framework
- expanding the framework to include new understandings about teaching and learning.

(from **Learning-centred education in Ontario's colleges,** September, 1995)

Outcomes-Based Learning (OBL) contributes to new understandings about teaching and learning. No longer can colleges provide structured, preset programs which require that learners fit the boxes we have created and then instruct learners using traditional delivery methods, conventional teaching techniques and similar content for all.

"To say that community colleges are in the business of providing instruction is equivalent to saying that auto companies are in the assembly line business." (Barr, 1995)

Rationale for a Paradigm Shift

Internal reasons for making changes to teaching and learning

Colleges have to:

- meet the financial challenges facing the system
- use fully all available resources for educationally sound purposes
- equip learners with the tools they need to participate in and direct their own learning including using technologies that are not time- and space-bound
- serve larger numbers of learners with reduced funds.

(from **Learning-centred education in Ontario's colleges**, September, 1995)

External reasons for making changes to teaching and learning

In our society:

- many people previously not served by the colleges are in need of training and upgrading
- many unemployed routine production workers are seeking a postsecondary credential
- many laid-off workers are requesting academic credit which recognizes the learning they have acquired through many years of experience on a job
- there is a growing public perception that learning does not just occur in formal, public learning institutions which means that colleges have to compete with other avenues for training.

The impact of Prior Learning Assessment (PLA):

- colleges are being forced to establish well-articulated PLA systems and procedures that are integrated into education and training programs
- PLA makes it necessary to define the learning which is achieved in colleges in order to be able to assign credit for learning of equal value achieved outside the college
- PLA credit for prior learning achieved through experience allows learners to progress through a program faster and achieve a credential in less time.

Stimulus for changes in college education also comes from business and industry

They need:

- more workers who are capable of expanding their job roles in organizations and shifting gears quickly to fulfill new functions
- effective learners who can take full advantage of costly training programs
- people with a strong generic skills foundation (employability skills) who are effective team workers, thinkers, problem solvers, inventors, etc.

College systems have to define the learning outcomes related to these employability skills and develop curriculum which enables learners to achieve more complex, higher-level, transferable abilities for the 21st century.

Focusing on equipping the learner to be a capable employee and lifelong learner is different from:

- training a worker to fit a particular job that may change or disappear tomorrow
- instructing and testing learners in a set of specific behaviours related to a task analysis of current jobs.

To make college education more responsive to new economic and human needs we have to:

- alter our vision of the mandate and focus of college education in the information age
- abandon the program delivery and teaching methods that were suited to the industrial age
- become learning-centred instead of subject- and time-based
- write college-level learning outcomes that describe exit performances that graduates have to demonstrate reliably
- ensure that college graduates have met consistent standards of performance
- facilitate transfer from one college to another
- facilitate access to teaching and learning services which are just-in-time, efficient and effective
- provide a strong foundation for more complex career-oriented learning by equipping our learners with college level generic skills.

Steps we need to follow in order to make the shift?

We need to:

- revisit our values/beliefs about learners and learning
- adjust our values/beliefs to account for new knowledge about how learning occurs
- make connections between learning-centred education and outcomes-based learning

Part I - THE PARADIGM SHIFT - REVISITING VALUES ABOUT TEACHING AND LEARNING

Educational reform of the magnitude that is needed cannot be accomplished by tinkering around the edges. Our traditional beliefs about learning, learners, the role of educational institutions and their relationship to the economic development of the nation have to be revisited.

What values have prevailed for the past several decades about learners and learning?

What new knowledge about learners and the nature of learning has emerged in the past few years?

What new philosophical approaches may help us address the massive economic, political and social shifts we are experiencing in Canada?

Two major philosophical approaches differentiate traditional views of learners and learning from the learning-centred approaches associated with OBL. These two approaches emerge to a great extent from two polar conceptions about humanity. One of these approaches sees human beings objectively as predictable and sharing many common characteristics which become individual largely because of different factors in the environment which they experience.The other approach sees human beings subjectively as unpredictable, uniquely individual and influenced to a great extent by inherited characteristics and the complex interplay of emotions, drives and inner motivations.

In 1969, William Hitt devised a paradigm he called "Two Views of Man" (Humankind) in which he tried to explain two defining perspectives on the nature of human beings which have many implications for how we view learners. The two opposing perspectives were called the "rational" and the "phenomenological" polar conceptions. According to Hitt, people have tended to fall into one camp or another, for the most part. We have to understand that the values we hold about human beings have considerable influence on how we view the students we teach.

1. Polar conceptions of the nature of human beings

Scenario 1.

Judy Kent, a social sciences teacher of fifteen years, had just given back to students a mid-term test based on the first six chapters of the introductory psychology textbook for her course. Six students who had failed the test approached her right after class to complain that they had not understood the concepts in the text and could not follow her lectures based on the textbook topics. Judy asked them if they had spent sufficient time reading the textbook chapters and studying their notes. The students replied that they had spent hours doing both but nothing made any sense to them. Judy commented that during her lectures their attention often drifted and that she had noted that they seldom stayed behind after class to talk with her about lecture material as many of the other students did. She suggested that the subject might make more sense to them if they knew how much their ability to get jobs as social service workers depended on their knowledge of psychology. As a way of acknowledging their learning difficulty, Judy offered to show them what parts of the notes she had given each day should be underlined and memorized. As they left her office, the students thanked their teacher for hearing them out. Judy's parting words were that students who are good at interacting directly with people are often not as capable in handling academic subjects.

Scenario 2.

Mario Debenetti was straightening up the broadcasting studio just as one of his students, Piers Rachlis, walked in looking very disturbed. That day in class, Mario had listened to brief news summaries delivered by a dozen students and had provided anecdotal feedback on their performances. He remembered that Piers had stammered through most of his news clip and halfway through had stopped making eye contact with the other students who formed the audience. Taking a seat, Mario commented that he was glad Piers had dropped by. He asked the student if he knew of reasons for his discomfort during his brief news report. Piers replied that he was coming to terms with the fact that maybe he was not suited to broadcasting because of his chronic shyness. After questioning Piers about his reasons for registering in the broadcasting program, Mario asked Piers if he would repeat his news summary in the next class and offered some suggestions to help him focus on what he was saying more than on the audience before him. As the student got up to leave, Mario explained that good broadcasters are cut from many kinds of cloth and that Piers' genuine goal to be a broadcast journalist was what really counted.

2. Two views of humankind

(adapted from Wm. Hitt, 1969)

RATIONAL/Behavioral	*PHENOMENOLOGICAL/Developmental*
People can be described meaningfully in terms of their behaviour.	People can be described meaningfully in terms of their consciousness.
People are predictable. One person is like other persons.	People are unpredictable. Each person is unique.
People live in an objective world and can be described in absolute terms.	People live in a subjective world and can be described meaningfully in relative terms.
People are extrinsically motivated.	People are intrinsically motivated.
People are rational beings who receive information passively.	People are information generators.
Human characteristics can be investigated and understood independently of one another.	People must be studied and understood as a whole.
A person's characteristics are fixed at birth.	A person's characteristics unfold over time.
A person is knowable in scientific terms.	A person is more than we can know about him/her.
Studying human beings is a matter of studying their observable behaviours.	People are best understood in the context of events/experiences in the real world.
Behaviour can be modified by controlling stimuli within the environment.	Human behaviour emerges from within the individual. The underlying causes of behaviour are complex and difficult to understand.

Rational views of humankind contributed to the emergence of the behavioral science tradition in psychology which has had a profound impact on educational systems especially in North America. The behavioral sciences were closely linked to the industrial era.

Phenomenological views of humankind are closely related to developmental psychology and cognitive science. These views and psychological theories have replaced many of the mechanistic views of the past. As technology has advanced and the increasing complexity of work has heightened the demand for high performance workers, more emphasis has been placed on the development of human potential. Educational institutions at all levels are being challenged to increase the ability of human beings to perform at higher levels.

These two major schools of thought have influenced Western traditions in education. Behavioral science (rational school) has supported cultural transmission educational models. Developmental psychology (phenomenology) has supported transformational educational models.

3. Beliefs about learners and learning based on different philosophical perspectives

BEHAVIORAL Cultural transmission models - (industrial age)	***DEVELOPMENTAL Transformational models - OBL (information age)***
Education transmits the values/norms of a culture.	Education promotes optimal human development
Behaviour is learned and learning is defined as a change in observable behaviour.	Behaviour emerges from a complex set of internal responses which are not directly observable; learning occurs as a result of internal changes
Learning is relatively passive; teachers deliver and students receive.	Learning is an active process which occurs largely through active interaction in the environment and with authentic experiences.
Learning is externally motivated through positive reinforcement/rewards	Learning is internally motivated; people usually want to improve themselves and to succeed.
Learning is a product (output) of inputs and processes which should be the same for all learners	Learning involves the ability to integrate knowledge/concepts, skills, dispositions; the manner and time in which this occurs varies from person to person
Learning is public and discipline-centred (subject-based); the product of learning is mastery of content/subject matter or discrete skills	Learning is personal and holistic; it crosses subject areas and allows for transfer of learning to new contexts and problems.
Learning outputs are measured as discrete behaviours, skills or units of knowledge (content) usually in prescribed contexts and under specific conditions that are not necessarily transferable. (standardized testing)	Ongoing assessment and feedback on progress are followed by evaluation of expected performance which relies on integrated learning that is transferable to novel problems and situations
Cohorts of learners progress together through a time-based curriculum (programmed instruction)	Learners progress at their own rate by practicing applications of integrated learning related to the expected performance
Emphasis is placed on right/wrong answers related to content/subject matter or specific skills	Hypothesis-testing and problem solving are built into most learning activities to promote inquiry and foster understanding.
Content and specific skills are taught and are often separated from their applications	The essential features of the integrated learning to be achieved are made explicit

4. Task/Learning Activity #1

4.1 Introduce yourselves to each other at your tables by:

- giving your name, your college role
- briefly (one minute) describing a time/event in your life when "in-depth" learning occurred for you, i.e. you moved from "knowing about something" to "knowing how to do something" (applying/performing)

4.2 Appoint a timekeeper and a note taker/reporter for your group.

4.3 Reflect on the learning experience you have shared with your colleagues at your tables.

- Write a short list of indicators which describe how you knew you had achieved a level of "deep learning" or "knowing how" rather than just "knowing that".

Example: I knew that I had learned how to do something because I was able to:

- explain to someone else why I was doing what I was doing
- transfer what I had learned in one context to a different context.

4.4 On flip chart paper, create a group list of indicators that "deep learning" has occurred. Post your list near your table.

4.5 Describe the characteristics of the learning process in which you moved from "knowing about something" to application and performance.

Example: I learned how to do this by:

* observing a demonstration and then practicing the skills myself until I could perform them successfully
* reading a series of articles related to both sides of the issue and preparing an argument in favour of one side of the issue (e.g. gathering information about the issue, deducing the central concepts involved in the issue, deciding which concepts are valid and supported by the information and my values/beliefs)
* applying facts and information I had learned to a problem I had to solve.

4.6 Discuss the implications of these characteristics of the learning process for teaching practices, i.e. how should these learning characteristics influence the way we teach, facilitate and evaluate learning?

Time allotted _____

I KNOW IT!!!

You know "it" when you can:

verify it

critique it

defend it

avoid common misunderstandings about it

use it in different contexts

reveal insights into it

Grant Wiggins, 1995

IMPLICATIONS FOR TEACHING

To help learners acquire, integrate or find meaning in knowledge, teachers can help them to:

create analogies

construct outlines

develop visual representations

build concept maps

compare/classify

abstract

To help learners use knowledge and skills, teachers can provide learning experiences where they:

make decisions

problem solve

create products

teach others

critique/defend

predict

(Adapted from: Marzano, Robert J., 1992. **A Different Kind of Classroom: Teaching with Dimensions of Learning**)

Part II Transforming Colleges Using Learning Outcomes - Outcomes-Based Learning (OBL)

1. Why shift to outcomes-based learning (OBL)?

Relevance of learning outcomes to the educational reform effort in colleges and institutes?

a) Accountability

Governments are increasingly interested in "results". Economic conditions demand that institutions prove their effectiveness and efficiency and that they are delivering what society needs. Learning outcomes are statements which describe the "results" that must be achieved by learners before they graduate. College systems will have to demonstrate that these results have been achieved through accountability mechanisms such as program review, performance indicators and accreditation systems.

b) Effectiveness

Governments see learning outcomes as a way of making explicit the teaching and learning services that colleges provide. Learning outcomes become the criteria for determining how effective a college/program has been in living up to its promise. Learning outcomes clarify our mission and keep us focused on meeting our obligations.

c) Efficiency

Training and education involve huge investments of public and private money as well as human energy and time; therefore, they must be as streamlined and cost-effective as possible while retaining quality and high standards of performance. Learning outcomes force us to pursue what is essential and eliminate or reduce what is non-essential. Learning outcomes describe the essential learning which must be demonstrated by learners in order to receive a credential, not learning that is nice to have or advanced learning which is designed to segregate learners' performances into good/better/best.

d) Transferability

Learning outcomes represent the integration of knowledge, concepts, skills and dispositions in complex role performances. They are different from behavioral objectives or competencies which describe discrete knowledge or skills that are task- and job-specific. Integrated learning which learners demonstrate in role performances is broadly-based and transferable.

e) Flexibility in delivery of teaching and achievement of learning

Since learning outcomes describe only what the learner has to demonstrate reliably at the end of a learning process, many avenues to achieving the learning outcomes may be pursued by learners, not just one route. Learning outcomes acknowledge that learning occurs both inside and outside our colleges/institutes, and through many kinds of learning activities. Credit for learning should be based on whether the learning has been demonstrated not how or when it was acquired. Programs and colleges should ensure flexibility with respect to curriculum, teaching and learning methods and resources which may be used to facilitate learning.

f) Equity

It is achievement of the learning outcome that is evaluated and not the various sequential steps along the way. Achievement of the results is what counts in receiving credit, not how long or what route a learner took to get there (could be a formal, informal or experiential route). Learning outcomes are the same for all learners who are pursuing a specific credential and all learners have to demonstrate that they have achieved them. Learners are not "graded" according to the extent to which their performance approximates the anticipated results.

g) Access

Learning outcomes make explicit to the public the nature of the learning to be achieved in order to graduate from a program or obtain a credential. Much of the mystique around what happens to you when you go to college disappears when the learning outcomes associated with a credential are clear to everyone. People may be more inclined to risk entering a college or institute when they know what they are expected to do there and how they will be helped to achieve their goals. Explicit program learning outcomes make it easier for PLA candidates to prepare portfolios and write challenge tests to receive credit for learning achieved through experience.

h) Quality

Learning outcomes that are agreed to by a college system or a network of institutions usually express a level of achievement that is realistic and attainable within reasonable timeframes and with reasonable resources by the majority of the learner population admitted to a program. They do not represent "lowest common denominator" in learning when they are determined in consultation with employers, practitioners, curriculum specialists, faculty, learners and graduates. Learning outcomes instead promote consistent high quality across programs and systems rather than a patchwork quilt of expectations, inputs and results.

2. Differences between traditional education and OBL

Traditional education has assumed that if all the inputs are in place - e.g. time/hours, subject matter/content, teacher direction, print materials etc. most learners will have achieved the intended learning at the end of the course/unit of learning. But often what is measured/evaluated is not transferable learning but rather specific content, factual knowledge, discrete skills/tasks, etc.

" The implicit agenda of the shift from traditional education to outcomes-based learning is to help passive minds become active minds." (N. Whitehead, 1995)

2.1 Program design

Traditional	OBL
inputs are important	results are important
time-based; specifies term-long courses that are subject-based with number of hours per week/term	outcomes-based; programs/learning units are linked to learning outcomes and imply flexible use of time, resources, space
learners grouped in classes and move through courses/subjects together	individual learning plans (ILP's) which provide various routes to the program learning outcomes
subjects and sections are assigned to teachers who prepare and teach classes and evaluate learners	learners may be assigned to teachers who may be responsible for a set of learning outcomes related to a program
learners accumulate courses and grades over a set number of terms which eventually lead to a credential	learners demonstrate achievement of learning outcomes attached to a program over time and according to an individualized learning plan

2.2 Teaching roles

Traditional	OBL
faculty prepare, teach, evaluate with respect to their own subjects/courses (learners learn what is taught)	teachers design, plan, facilitate, instruct, demonstrate, assess, evaluate related to a set of learning outcomes
teachers stand and deliver in class; are seen as repositories of information which they disseminate	teachers advise, consult, coach, facilitate, provide resources, demonstrate, instruct
most teacher-student "contact" is classroom-based especially for purpose of workload designation	teacher-learner "contact" may be based on the numbers of learners a teacher as member of a teaching team has responsibility for
teachers provide teaching and usually work autonomously	teachers facilitate learning and usually work as members of teaching teams

2.3 organizational

Traditional	OBL
from provision of teaching	to design, facilitation and evaluation of learning achieved
admissions policies and selection procedures to screen applicants	open access to college for applicants with high school diplomas - to - access services - program areas/clusters
funding formulas based on number of students filling quota of "spaces" in programs	fees may be charged for all college services including access services, teaching/learning services, evaluation services; learners may be funded
teaching and learning occur in classrooms/labs under teacher direction/supervision; space is often at a premium	space may be used differently e.g. teaching and learing move through various environments - e.g. classroom, labs, authentic workplaces, Internet, library, local learning centres, virtual classrooms and campuses

3. What are learning outcomes?

Learning outcomes are statements which describe the significant, essential, transferable, verifiable learning that must be demonstrated in order to receive credit for a unit of study/course/program.

They are not simply a listing of discrete skills nor broad statements of knowledge and comprehension. They are usually expressed as culminating role performances that are complex and represent integrated learning of knowledge, concepts, skills and dispositions (values/habits of mind/attitudes).

The role performances described by learning outcomes are transferable to a range of vocational and personal life-role contexts.

EXAMPLES

Evaluate the validity of arguments based on qualitative and quantitative information in order to accept or challenge the findings of others. (CSAC Generic Skill program learning outcome #8)

Respond effectively to a patient who is suffering from the symptoms of a common cold and has requested advice about treatment, care and preventative strategies to follow during the "cold" season. (a course learning outcome)

Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. (CSAC Generic Skill program learning outcome #5)

Evaluate a developmentally-appropriate physical curriculum for three- to five-year-olds which has been planned and implemented to promote children's progress to the next developmental stage (vocational program learning outcome)

3.1 How are Learning Outcomes different from Behavioral Objectives/Competencies

Learning Outcomes	NOT	Behavioral Objectives
performance specifications which describe performances demonstrated in authentic contexts	**not**	design specifications which describe inputs such as topics to be covered or discrete skills to be mastered during the course
adult life/work role expectations	**not**	job-specific skills/tasks/knowledge
essential outcomes which represent exit standards for a program/course/unit of learning	**not**	preferred outputs which are demonstrated in sequence and measured at specific intervals throughout the course
the results of integrated learning (knowledge/concepts/skills /dispositions) expressed as role performances	**not**	intentions that drive curriculum design
transferable abilities based on integrated learning applicable in many contexts	**not**	directly observable behaviours that are specific to context, content, conditions and time
learner-centred and performance-based	**not**	discipline/subject-centred or content based

3.2 Characteristics of Learning Outcomes

Learning Outcomes:

- **describe complex role performances (that are appropriate for college-level learning)**
- **integrate knowledge/concepts/skills/dispositions**
- **represent essential role performances for graduates**
- **are verifiable/measurable using qualitative or quantitative means**
- **represent learning that is transferable to a variety of contexts**
- **do not dictate curriculum**
- **are clear and understandable to learners, educators, employers and general public**
- **reflect principles of equity and fairness for diverse learners**
- **are realistic and achievable within reasonable timeframes**
- **represent present and anticipated needs**

3.3 Learning Outcomes Checklist

Consider each learning outcome to ensure that it:

The learning outcome characteristic is present	YES	NO
1. is clearly stated		
2. is verifiable and represents one single performance		
3. describes durable learning that is meaningful and significant		
4. describes transferable learning		
5. describes learning that is performance-based		
6. describes learning that is to be achieved before credit is granted		
7. describes learning that is respectful of diverse learning environments		
8. is free of cultural or gender bias		
9. supports one or more program standards/learning outcomes		

4. Writing Learning Outcomes for College Programs

4.1 Determining program learning outcomes

Learning outcomes for programs are determined through a process of consultation with employers, practitioners and educators. They should not simply reflect existing curriculum. The most likely steps in the development of learning outcomes for programs are as follows:

a) Create a profile of the effective graduate by listing the characteristics that are present in a person who is most likely to succeed in a career area.

b) Envisage future trends in the vocational area such as technological change and their implications for the graduate working in the career area.

c) Postulate the complex role performances that graduates of a program should demonstrate in order to practice successfully in the career area.

d) Distill the information that has been generated in Steps a) to c) into a list by:

i) grouping some items together
ii) assigning priority to items
iii) eliminating non-essential items
iv) adding forgotten items
v) finalizing the list.

e) Prepare draft statements that are consistent with the essential characteristics of learning outcomes.

f) Review and revise the learning outcomes by checking them against the criteria of essential characteristics.

g) Submit the learning outcomes to a process of validation and review.

4.2 Building program learning outcomes into programs and courses

Note: *At Algonquin College, the gradual movement to OBL has begun by asking teachers to revise courses and rewrite course outlines which identify learning outcomes for the course. Course learning outcomes are defined using many of the characteristics that apply to program learning outcomes.*

5. Deciding on learning outcomes for courses

Faculty working together usually determine the course learning outcomes for all courses attached to a program. As a program teaching team, consider the contribution that a course makes to the program learning outcomes.

Faculty teams should answer these key questions:

a) What aspects of the program learning outcomes should be addressed in each course?

b) Is the current curriculum structure (i.e. the specific courses including labs, theory courses, field placement, clinical experiences, etc.) the best way to deliver the program in an outcomes-based environment? (Check for efficiency and effectiveness; is this course offered at the right time in the program? What other courses relate to this one? Do two or more courses share common learning outcomes?)

c) Is it possible that the thoughtful writing of learning outcomes for programs and courses may eliminate unnecessary repetition and redundancy in programs and result in a more efficient/streamlined program.

Once these and other questions have been addressed by programs, course learning outcomes should be written for each course.

*****The combined course learning outcomes for all courses in a program should cover all program learning outcomes.***

Determining course learning outcomes

Course learning outcomes may be determined deductively or inductively.

Deductively:

Reflect on the role performances a learner should be able to demonstrate at the end of a course. These course learning outcomes should reflect applications/performances that require integrated learning of knowledge/skills/dispositions and be directly related to one or more program learning outcomes. Some course learning outcomes may be the same as a program learning outcome or they may be stepping stones along the way to the eventual achievement of one or more program learning outcomes.

Even a theoretical course that is very knowledge-based should require applications of the knowledge/content to ensure that knowledge has been understood and can be used effectively.

For example, a child development course should ensure that learners know the developmental stages and relative ages for all developmental domains; however, the role performances described by the course learning outcomes should require learners to demonstrate that they can apply what they know about child development.

Example: Learners have reliably demonstrated the ability to record accurately information based on observations that assists in determining a child's developmental level.

Inductively:

An inductive approach to determining course learning outcomes might proceed like this:

a) List the knowledge, skills and dispositions that are important learning components of a course

b) Group the items in the list in (a); i.e. can some items be grouped to make explicit the ways in which learners may integrate knowledge/skills/dispositions into a performance?

c) Prioritize the items: i.e. are some items subsets or stepping stones to other items? Are all items essential? Would everyone teaching a similar course agree that they are important?

d) Refine the list by eliminating unnecessary items, adding forgotten items or combining related items.

e) Express the learning outcome as a role performance and preface the performance with the words: "the learner has reliably demonstrated the ability to":

f) Ensure that the learning outcome describes one single performance not two or three in one statement; remember that the verbs you choose are important, so make sure that they describe what the learners should **do** with the integrated learning they have acquired.
(Refer to handout, **Fundamental Performance Roles**)

When you have written a set of course learning outcomes, consider them collectively to ensure that they:

- are manageable in number
- reflect a balance between practical and theoretical understanding appropriate to the course
- do not overlap
- describe all the essential performances that should be demonstrated to receive credit for the course
- together with the course learning outcomes for all courses in the program cover all the program learning outcomes.

(Refer to the **Checklist** and the **Pitfalls to Avoid** handouts.)

6. What pitfalls should be avoided when writing learning outcomes?

PITFALLS *Statements are:*	UNACCEPTABLE *The students will:*	IMPROVED *Learners have reliably demonstrated the ability to:*
written to reflect **specific content**	describe the levels of Maslowe's Hierarchy of Needs	use theories of motivation to interpret human behaviour in non-stressful situations
not written as an outcome but as a **goal** or a **process**	engage in learning about the role of experience in learning	prepare a personal portfolio which identifies specific learning acquired through experience
not realistic	1. list the chemical symbol and valencies of all the known elements 2. list the regulations that relate to child care delivery services	1. write and interpret equations to represent chemical reactions that maintain acid base balance 2. accurately interpret legislation related to typical problems which occur in child care programs.
too narrow so that the learning is not sufficiently transferable	1. explain the merits of equity legislation 2. describe the functions of WordPerfect 6.1	1. deliver a presentation which addresses different perspectives on equity issues 2. use word processing software to prepare reports with text, graphics and tables
trite or **inconsequential** and do not describe significant learning	1. outline the contribution of Stanley Burke to Canadian broadcasting 2. make accurate calculations of revenues versus expenditures of small business bookkeeping	1. report on the evolution of Canadian broadcasting citing the contributions of significant broadcasters 2. display balance sheets which provide accounting information that is accurate and clear
descriptive of learning which is **not verifiable**	1. promote customer service as the key to effective marketing 2. improve his/her understanding of the laws of electricity	1. plan a marketing campaign which emphasizes customer service 2. use the laws of electricity to explain the viability of particular circuitry in specific applications
dependent on the **teaching process** or the way the material is taught	1. report on the results of an experiment conducted to demonstrate the effects of inadequate insulation 2. defend one of the positions taken on euthanasia in the film "A Time to Die"	1. apply the appropriate sealing agents to ensure optimal air circulation 2. present arguments on both sides of the euthanasia issue
dependent on the **environment** in which the learning occurs	1. administer and record medications according to the policy of the General Hospital	1. safely administer and record medications respecting legal guidelines

7. Tasks/Learning Activities #2

7.1 Using the Pitfalls to Avoid handout, discuss each pitfall and state why the "improved" statement is better than the poor statement.

7.2 For your own program area, or for a program area you know well, each participant should do the following:

a) write a program learning outcome that a learner should reliably demonstrate in order to graduate

b) use the Characteristics of Learning Outcomes and the Checklist as a guide

7.3 As a group, select one learning outcome to post on flipchart paper and present to the large group.

Time allotted: _____minutes

Part III - FACILITATING AND ASSESSING LEARNING

1. Key questions to ask as you begin to plan for learning in courses/units of learning:

a) What is the significant, integrated learning that has to be achieved by all learners in order to receive credit for the course?

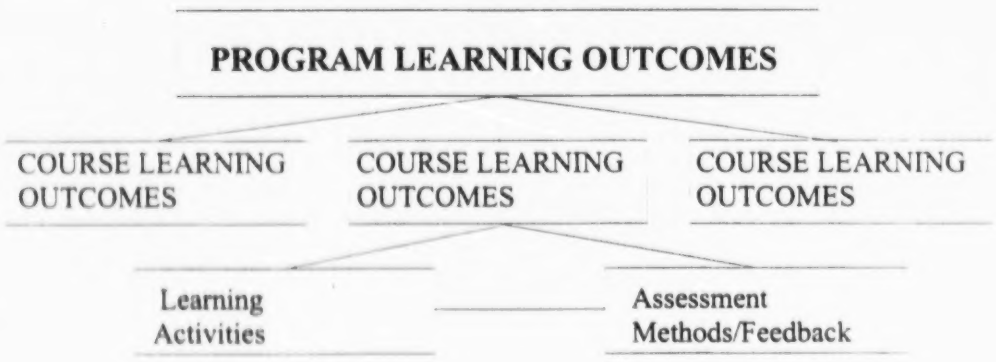
b) How should I break down this significant, integrated learning (course learning outcomes) into its component parts? What are the bite-sized chunks of learning that together lead to the ability to achieve the role performance? Is there a typical sequence in which the component parts (bite-sized chunks) of learning usually occur?

c) How can I best facilitate learning of the bite-sized chunks in order to meet the learning needs of my learners? i.e. what are their learning styles? what are their various backgrounds and knowledge?

d) If I assume that most college learners learn best by "doing", what learning activities should I plan in order to provide active opportunities for practice and eventual achievement of the bite-sized chunks of learning?

e) What learning activities should I plan to provide learning opportunities that require practice of the integrated performances described in the course learning outcomes?

f) What assessment strategies will provide assessment and feedback opportunities for learners?



2. Planning Learning Activities

2.1 Rationale and Planning Format

When course learning outcomes have been written, the next step is to plan the learning activities which provide practice and learning opportunities that are directly related to the course learning outcomes. This step is a very important part of the teaching function. As integrated learning of role performances usually occurs incrementally, often in sequenced stages, learning activities have to be planned to facilitate learning in bite-sized chunks that lead progressively to the achievement of the course learning outcomes.

Learning activities in a course will therefore be of two kinds:

those which address incremental learning;
those which address culminating role performances.

Learning activities which address incremental learning (the stepping stones) may be described briefly for the learners at the point when the learner is ready to undertake a new step in learning. These incremental learning activities may take the form of textbook assignments, tests or quizzes, problem solving exercises, small projects or papers, demonstrations, reports, etc. All learning activities provide assessment opportunities for teachers and take the form of directional feedback that is improvement-oriented. It is not necessary that scores or grades be given for these incremental learning activities since they are intended to provide opportunity for practice, learning and feedback.

Learning activities that provide practice and culminating demonstration opportunities related to the role performances described by the course learning outcomes should be described in written handouts and given to learners at the beginning of the course. These complex learning activities are often project-based and done over an extended period of time. They require that learners integrate knowledge, concepts, skills and dispositions effectively in the successful execution of the activity.

Given their importance as evaluation instruments, these culminating learning activities should be described in written handouts and given to learners at the beginning of the course/module/unit. These descriptions should include the name of the learning activity, the learning to be achieved, the previous experience/learning required, the resources needed, the methods/practices/procedures to be followed (if applicable), the assessment and evaluation methods to be used, and the criteria for final evaluation.

(See **Learning Activity Planning Format**)

A learning activity planning format

Name of activity:

Learning to be acquired:

Previous experience/learning needed:

Resources required: (materials, equipment, supplies, etc.)

Teaching/learning methods

Assessment Methods/Instruments and Feedback

2.2 Other factors to be considered in planning learning activities

The diversity of educational backgrounds, learning styles and individual needs of learners should be considered as you begin to plan the learning activities for your course. Use information you know about your learners so that the learning experiences you plan will be meaningful, interesting and clear to them. Ensure that the range of incremental and culminating learning activities you choose address the diverse range of learning styles among your learners and offer some choice in terms of how the integrated learning will be practised and demonstrated. For example, you should provide a good mix of hands-on, practical activities, more scholarly or academic kinds of activities, group and individual activities, language-oriented and action oriented activities.

Culminating role performances require that you consider the authentic performances that relate to work/vocation or personal life. Authentic learning activities will have more meaning for learners and will be motivational in the sense that learners can see the value of the activity and its learning outcome. Plan a range of learning activities from possibilities that include: collaborative learning projects, project-based learning through independent study, lab or placement demonstrations, academic papers or assignments, problem solving exercises, presentations or reports, to name a few.

3. Creating a practice and assessment plan

Ask yourself the following questions:

a) What tasks/activities/performances are the learners engaged in?

b) What are the suitable "moments" for focused observation of their learning?

c) How should I record what I observe?

d) What should I look for in their performance that would be deemed evidence of progress?

e) What kind of feedback do learners need in order to be guided toward improving their performance?

f) How should I provide feedback? (e.g. anedotal, verbal, checklist, rankings against performance indicators, etc.)

g) How should I intervene with learners who have demonstrated no progress? (e.g. additions to portfolio, report card, computer printout, on-line files)

h) How should I document learner performances?

4. How does OBL change assessment and evaluation practices?

FROM TRADITIONAL PRACTICES	TO OBL
a knowledge transmission approach in which assessment is separated from teaching with tests/exams/assignments based on knowledge at specific times in the term	an integrative (transformational) approach in which assessment is integrated with teaching and learning activities and focuses on the application of knowledge/skill/dispositions
evaluation of the mastery of knowledge/skills in a time-based sequence in which the scores/grades on each evaluation instrument add up to a total score or grade for the course at the end of term	evaluation of integrated, cross-disciplinary learning and ability to apply this integrated learning to complex role performances which are described by the learning outcomes for a program/course/unit of learning
"sink or swim" spot checks (such as tests/exams/assignments) which all "count" and do not allow for second chances, improvement-oriented feedback and progress	ongoing assessment that is improvement-oriented and often anecdotal rather than quantitative; provides feedback which guides the learner toward the learning outcome
one-time/one-shot time-based final exams	portfolios of work completed over time
single dimension assessment and evaluation which focuses on the acquisition/mastery of a specific set of knowledge/content or skills	multi-dimensional assessment which assesses the learner's ability to integrate knowledge, concepts, skills and dispositions in a role performance
individual testing and examinations, individual projects	more frequent use of group projects/assignments which assess the ability of participants to collaborate; i.e. create, problem solve and work as team members
what is to be demonstrated in a testing/exam situation is a secret held by the teacher until the testing time (so that the learner is left to "guess" what will be "on" the exam/test)	the role performances that are to be evaluated are made explicit to learners ahead of time so that they know exactly what evidence of integrated learning will be evaluated and the criteria upon which determination of successful achievement will be based
norm-referenced grading systems (ABCDF and grade-point averages) which compare learners against each other in the same cohort or population	outcomes-referenced evaluation which assesses whether or not a learner has reliably demonstrated achievement of each learning outcome

EXAMPLES

1. Integrating Learning Outcomes Into Programs/Courses

Example: Manage the use of time and other resources to attain personal and/or project-related goals. (CSAC Generic Skills Learning Outcome #10.)

Questions to consider in integrating this learning outcome into programs/courses:

a) What are the steps involved in this learning, i.e. the discrete knowledge/skills/values?
b) Is there a logical order in which to sequence the learning steps? If so, describe that order.
c) What do learners need to do/practise in order to achieve the discrete knowledge/skills/values that are implicit in this learning outcome?
d) Should this learning outcome be attached in its entirety to one course? Should it be broken down into component parts and addressed as a series of incremental steps which are attached to several vocational, generic skills and general education courses in the program? If the latter, how and in which course(s) will the culminating demonstration, i.e. the program learning outcome be demonstrated and evaluated?
e) If the learning outcome is to be addressed incrementally in several courses, how should the course learning outcomes which relate to it be expressed?
f) How will learners' progressive achievement of the incremental learning related to the course learning outcome be assessed?
g) How will learners' achievement of the integrated role performance described by the learning outcome be evaluated?
h) Once the course learning outcomes have been determined, what is the best approach to facilitating learning?
I) What do learners need to do/practise in order to acquire the knowledge/discrete skills/dispositions related to the learning outcome?
j) What learning activities provide the practice and learning opportunities that will lead to the achievement of the learning outcome? Is it possible to provide a range of hands-on, practical, academic, group, individual practice and learning opportunities?

Then,

a) Plan learning activities that provide practice and learning opportunities related to the stepping stones (bite-sized chunks) of learning inherent in the learning outcome (incremental learning activities).

b) Plan learning activities that provide practice and learning opportunities related to the culminating role performances, i.e. integrated learning, described in the program learning outcome (integrated learning activities).

2. A Sample Learning Activity/Assignment Guide

Introduction:

For a general education course called "Personal and Career Goals for the New Economy", the course learning outcomes are:

* manage the use of time and other resources to attain personal and/or project-related goals (CSAC Generic Skills Learning Outcome #10)

* **create a personal financial plan which accounts realistically for anticipated or actual income, regular expenses, personal spending goals, personal savings and some unexpected occurrences**

* collect, analyze and organize relevant and necessary information from a variety of sources (CSAC Generic Skills Learning Outcome #7)

* evaluate own thinking throughout the steps and processes used in problem-solving and decision-making (CSAC Generic Skills Learning Outcome #6)

For the course learning outcome:

"the learner has reliably demonstrated the ability to create a personal financial plan which accounts realistically for anticipated or actual income, regular expenses, personal spending goals, personal savings and some unexpected occurrences".

What kinds of learning activities would facilitate progress toward achievement of this learning outcome?

Some examples:

I) a series of math problems involving the calculation of interest rates, mortgage/rent payments, compound interest, credit rates, etc. (incremental learning activity)

ii) create a chart showing various kinds of savings options and their respective advantages and disadvantages (incremental learning activity)

iii) **report on a field trip to a financial/investment planning firm which explains what you learned about the advantages and disadvantages of a wide range of investment vehicles and strategies and helped you make decisions about your personal investment/savings arrangements** (integrated learning activity)

iv) create a personal monthly budget which accounts for monthly income, monthly expenses, spending allowances, savings and some unanticipated events (integrated learning activity).

EXAMPLE OF A LEARNING ACTIVITY/ASSIGNMENT GUIDE

Learning Activity/Assignment Guides should be written for all learning activities which involve integrated learning directly related to the culminating role performance described by the learning outcome.

Example:

Name of activity: Report on a field trip to a financial/investment planning firm which explains what you learned about the advantages and disadvantages of a wide range of investment vehicles and strategies and led to decisions about your personal savings/investment arrangements.

Learning to be acquired:

- knowledge of a wide range of savings/investment vehicles and how they work
- knowledge of the income tax laws related to interest, capital gains, etc.
- ability to accurately calculate interest rates compounded over various terms
- knowledge of the costs involved in money management and transactions made
- ability to make an informed decision and formulate a rationale for the decisions made about personal savings/investments based on organization of the knowledge acquired, etc.

Previous experience/learning needed

- knowledge of and ability to use decision making techniques
- ability to determine probabilities
- ability to use spreadsheets
- ability to perform accurate calculations involving annual and compound interest, tax calculations, etc.

Resources needed:

- print materials (books, journals, newsletters, etc.)
- software packages for calculations, projections, budgets etc.
- tapes/CD Roms (on various investment vehicles, investment strategies, etc.)

Teaching/Learning methods:

This learning activity is largely self-directed and involves both independent work and group collaboration. Learners should consult with the professor before making an appointment with an investment firm; they may elect to visit a firm in pairs or small groups with the agreement of the professor and the investment firm although the report should be personal and independent. Learners are expected to consult a wide range of learning resources before they visit the investment firm of their choice and prepare a detailed list of the questions they will ask related to the activity.

Each learner is responsible for the submission of a written report which includes the time, date, place, questions asked, an analysis of the information gathered and a rationale for decisions made about personal savings/investment strategies related to personal values and financial goals. The report should be submitted to the professor before February 15th. During the project, learners should make at least one appointment with the professor to ask questions, receive feedback or guidance on the project and report on progress.

Assessment/Feedback Methods

Each report will be assessed according to the following criteria:

a) a chart, diagram or table displaying a complete range of savings/investment vehicles and how they work including tax advantages/disadvantages etc.
b) accurate reporting of the different tax treatments accorded to various savings vehicles
c) a table displaying the comparative interest rates of various savings/investment vehicles which factors in money management and transaction costs
d) are the decisions made and the rationale consistent with the facts reported and the calculations that have been made?
e) is the report including charts, calculations, spreadsheets or other presentation format well-organized, clear, accurate and easy-to-read and understand?
f) does the report include background information gathered from various resources such as books/newsletters/tapes/CD Roms/software, etc.
g) has the report been submitted on time?
h) are the report and the decisions made by the learner sufficiently consistent with the learner's personal goals and values as stated that they may be used in real-life?

Feedback methods:

Each learner will receive feedback on their report according to the above criteria. Each learner will have an interview with the professor to discuss the report and rationale for the decisions made. In cases where some of the criteria for assessment have not been met, the professor will provide concrete written advice to the learner on how to improve the report and make progress toward the learning to be achieved. Feedback may suggest additional resources and set a date for a second submission if needed. Assessment of the report will include an indication of whether each of the items under "Learning to be acquired" has been successfully addressed.

DEFINITIONS OF TERMS RELATED TO OBL

Assessment

Assessment is the process of gathering and organizing data collected using a variety of instruments and methods in order to make informed decisions or judgements about performance. Assessment refers to the ongoing monitoring of learners' progress and the regular feedback that is provided by teachers to learners throughout the learning process. Assessment is formative in that it is improvement-oriented; this means that it is directional and specific, guiding learners toward achievement of the learning outcome. For example, mid-term tests and quizzes may be forms of assessment which test foundational knowledge and discrete skills that serve as building blocks toward achievement of the complex role performance described by the learning outcome. Assessment may be conducted formally based on specific projects or informally within the context of daily progress related to classroom participation and homework assignments.

Evaluation

Evaluation is the process of decision-making based on information gathered through ongoing assessment and analysis of data collected. Evaluation makes a judgement about whether or not a performance target has been achieved. It is the summative result of a unit of learning and usually includes a recommendation that credit be granted or not. When a learner has not achieved the learning outcome(s) that have been evaluated, the evaluation feedback should include assessment of the progress that the learner has made and what the learner still has to do/learn in order to achieve the learning outcome.

Standard

A standard is a reference point against which performance is measured. It describes the expected level of performance which demonstrates that the standard has been met and may include performance criteria against which learner performances are assessed and evaluated. (In Ontario, program standards will be set for all postsecondary programs offered in Ontario colleges.) They describe the level of achievement to be reliably demonstrated by learners in a program before they graduate. Reliable demonstration means more than once in more than one context. Standards allow for greater consistency and accountability since they are the same for all graduates of a program across the college system. Standards imply greater equity since all learners in a program may expect to be evaluated against the provincial standards for that program.

Learning Outcome

"Learning outcomes represent culminating demonstrations of learning and achievement. They are not simply a listing of discrete skills, nor broad statements of knowledge and comprehension. They describe performances that demonstrate that significant learning has been verified and achieved by graduates of the program." (CSAC, 1994)

Learning outcomes are statements which describe the significant, essential, transferable, verifiable learning that must be demonstrated in order to receive credit for a unit of study/course/program. They are usually expressed as role performances which represent integrated learning of knowledge, concepts, skills and dispositions (values/attitudes/habits of mind). Learning outcomes may be written for programs, courses, units of learning; they may include vocational or career-oriented (program area) learning outcomes or generic skills learning outcomes (employability skills).

Performance Assessment

A performance assessment is a direct and systematic observation of actual learner performance using demonstration (performance test) or a product of performance such as a project, major assignment or comprehensive examination. Performances may be demonstrated in a controlled environment such as a laboratory or classroom or in a real-life (authentic) environment such as work placement.

Complex Role Performance

A complex role performance describes learning that integrates knowledge/concepts, skills and dispositions (values/attitudes/habits of mind). They represent broad abilities that are transferable to a wide range of environments, experiences and circumstances.

Learning-Centred Education

Learning-centred education involves a process of teaching and learning that supports learners' achievement of an explicit set of learning outcomes. It involves planning learning opportunities to address the identified needs and interests of learners and facilitate their achievement of the learning outcomes. It selects and arranges resources and delivery strategies and methods to support individual learning. It assesses and evaluates learner performance on the basis of individual progress toward and achievement of the learning outcomes.

Generic Skills Learning Outcomes

Generic skills learning outcomes describe role performances related to employability skills needed to help learners get and maintain employment and perform successfully in their personal lives. They include role performances related to literacy, numeracy, technological literacy, interpersonal and intrapersonal skills, lifelong learning, thinking skills and interpersonal effectiveness. CSAC defines generic skills as "particular life skills essential for both personal and career success". (CSAC, 1992)